

Process for the biosynthesis of xylitol

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Abstract

The subject of the invention is a process for the production of xylitol from D-xylose by the action of the strain *Candida parapsilosis* ATCC28474, characterised in that it comprises the steps consisting in: 1. cultivating an inoculum of $2 \text{ to } 5 \times 10^6$ cells/ml of *C. parapsilosis* ATCC28474, under aerobic conditions, at a temperature of 25 to 35 DEG C, for the time required for the consumption of the sugar, at a pH maintained in the range of 3.8 to 5.4, in a fermenter containing: either a synthetic medium comprising 30 to 100 g/l of D-xylose, 2 to 10 g/l of KH_2PO_4 , 1 to 5 g/l of $(\text{NH}_4)_2\text{SO}_4$, and 0.1 to 1 g/l of $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$, or a hydrolysate of plant raw materials comprising 50 to 80 g/l of D-xylose, in the presence of 0.5 to 3 g/l of yeast extract, under aeration and stirring conditions ensuring a supply of oxygen such that the bioconversion of the D-xylose to xylitol is brought about, without allowing the reuse of the xylitol by the yeast, and 2. isolating the xylitol from the culture medium. Application to the industrial biosynthesis of xylitol.

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